

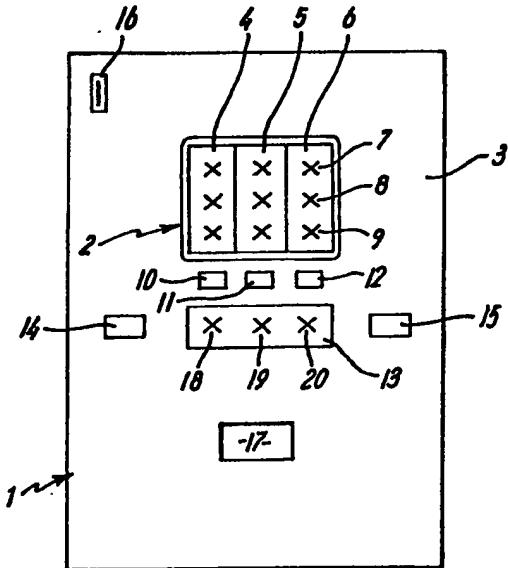
# UK Patent Application GB 2 157 047 A

(43) Application published 16 Oct 1985

(21) Application No 8408812	(51) INT CL <sup>4</sup> G07F 17/34
(22) Date of filing 5 Apr 1984	(52) Domestic classification G4V 118 AA U1S 1174 G4V
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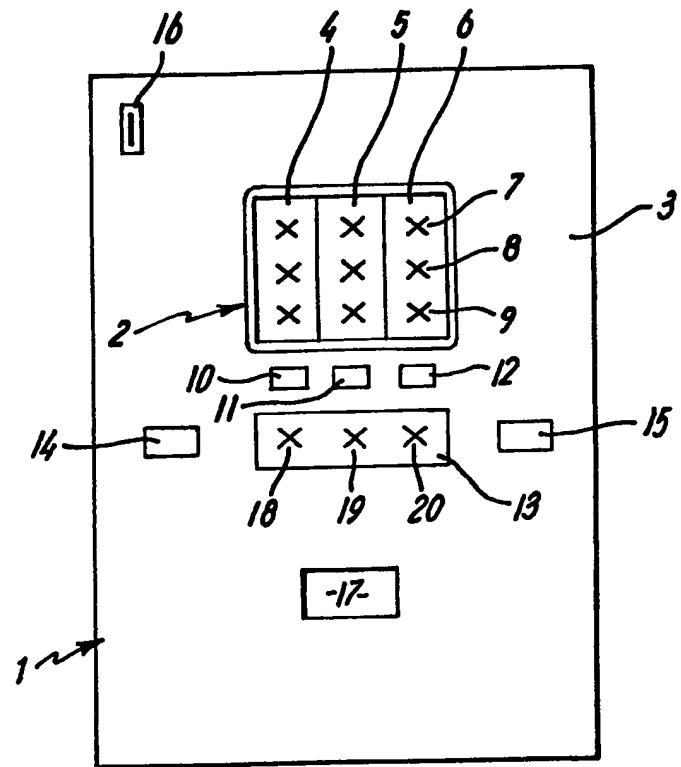
## (54) Entertainment machines

(57) An entertainment machine, such as a fruit machine, has a main display region (2) at which a combination of symbols (7, 8, 9) is randomly selected and displayed. There is also a supplementary display region defined by an electronically controlled matrix display device (13), such as an LCD matrix. The combination produced at the main display region (2) is evaluated together with a combination produced with the supplementary display device (13). Information and decorative animation may also be produced on the supplementary display device (13).



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## SPECIFICATION

## Entertainment machines

5 This invention relates to coin- (or token-) operated entertainment machines of the kind (hereinafter referred to as the kind defined) with which, on play of a game, a randomly selected combination of symbols is displayed at a main display region and an evaluation device produces a win indication in the event that the displayed combination is of a predetermined winning nature. The invention is more particularly, although not exclusively, concerned with such a machine, which 10 is of the kind known as a fruit machine, having a plurality of reels which have the symbols marked around their peripheries and which are rotated behind a window and then brought to rest after different random periods of time to produce the randomly selected combination of symbols displayed on one or more winning lines visible through the window.

With fruit machines as described above, it is usual to provide auxiliary game features to promote playing interest, such as a hold feature whereby the player is given the option at the start of a game of holding one or more reels against rotation, a nudge feature whereby the player is given the option at the end of a game of stepping one or 20 more reels through one or more stopping positions with the aim of improving the displayed combination, and other features.

It is also known to use in substitution for the rotatable reels a vdu display (cathode ray tube) simulating rotating reels and this can be advantageous in so far as it can facilitate the provision of varied game features. However, vdu fruit machines tend to lack player appeal and also can be expensive to manufacture.

40 An object of the present invention is to provide an improved coin- (or token-) operated entertainment machine with which playing interest and player appeal can be achieved with a relatively simple and inexpensive construction.

45 According to the invention therefore there is provided a coin- or token-operated entertainment machine of the kind defined characterised by the provision of a display device operable to produce a supplementary display at a region different from said main display region, said display device comprising an electronically controlled matrix display device, and said evaluation device being operable to evaluate the combination displayed at the main display region with reference to the said supplementary display.

55 By matrix display device is meant a device, such as a liquid crystal display, with which a visual change can be obtained at any of a number of different locations by appropriate application of electrical signals to selected ones of a plurality of electrical terminals associated with the respective locations.

60 With the arrangement of the invention it will be appreciated that game features can be readily provided with the aid of the supplementary display

device such as to promote playing interest, without necessarily detracting from the player appeal of the main display. Moreover, having regard to the nature of the supplementary display device a relatively simple and inexpensive construction can be achieved.

70 Preferably, the supplementary display comprises one or a combination of symbols of the same kind as those from which the main display is selected.

75 In this case, the supplementary display may define a supplementary winning selection whereby, for example, a win indication is given if the main display combination is the same as the supplementary display combination or contains a symbol the same as that (or one of the symbols) in the supplementary display. In this way the player is given an extra chance or at least an extra mode of winning.

80 The nature of the supplementary display may be selected at random or in accordance with a predetermined sequence or otherwise.

85 Also, the supplementary display may be made available in all games or in only some games as selected at random or in a predetermined manner. When available, the supplementary display may be produced automatically or only in response to operation of a player control such as a press button or the like.

90 The supplementary display may also be operable to produce an informative or decorative display such as alphanumeric information, animations or the like.

95 The entertainment machine of the invention is preferably a fruit machine, particularly a fruit machine with rotatable reels as described above and thus may incorporate any device or feature, as appropriate, as known in the fruit machine art.

100 The invention will now be described further by way of example only and with reference to the accompanying diagrammatic representation of one form of a fruit machine according to the invention.

105 The fruit machine comprises a large free-standing housing 1 having a window 2 in a front wall 3 thereof. Within the housing 1 behind the window 2 there are three side-by-side reels 4,5,6 mounted for rotation about a common horizontal axis. The reels 4-6 have 20 symbols (e.g. fruit) around their peripheries and have respective stepper motors operable to rotate the reels and also to arrest same in precise registration with the window 2 (i.e. such that three symbols 7, 8, 9 are displayed through the window).

110 Beneath the window 2 there are three player-operable hold/nudge buttons 10, 11, 12 associated respectively with the three reels 4-6, and beneath these there is a supplementary display device 13 yet to be described.

115 There are also player-operable control buttons 14, 15 a coin slot 16 and a payout outlet 17.

120 Within the machine there is an electromechanical coin mechanism, an electromechanical payout mechanism, lamps and other electrical and electronic devices which are connected, together with the device 13, the player-operable buttons 10-12, 14, 15 and the reel stepper motors, to a microprocessor-based control circuit.

A win table, i.e. a list of predetermined winning combinations of the symbols on the reel peripheries, is printed on the front wall 3 of the machine.

The display device 13 comprises an LCD dot matrix display which in usual manner has multiple electrical terminals to which potentials are applied to effect change in the light-transmitting properties of sections of the display.

With the machine so far described a game can be played, in the following manner, after an appropriate coin has been inserted into the slot 6.

A main control button 14 is operated by the player and this causes the three reels 4-6 to be rotated by their respective stepper motors. After different respective random periods of time the reels are brought to rest thereby to display a randomly selected combination of three symbols along a horizontal win line in the middle of the window 2. If this combination corresponds to one of the winning combinations in the win table then an appropriate payout is made via the outlet 17.

In accordance with conventional practice the player may be forgiven the opportunity, on randomly selected occasions, to hold one or more reels against rotation at the start of a game and/or to step one or more reels through one or more stopping positions at the end of a game, by appropriate operation of the hold/nudge buttons 10-12. Also, on attaining a win, the player may be given the option of gambling the normal payout value, in the hope of increasing this, by operation of a gamble button 15.

At an appropriate stage in the game, e.g. immediately prior to rotation of the reels, immediately after all reels have been brought to rest, or during reel rotation, the supplementary display device operates to produce a display of three symbols 18, 19, 20. At the end of the game the symbol combination on the win line is not only assessed (by evaluation circuitry of the main control circuit) with reference to the win table but also with reference to the display on the device 13. The arrangement may be such that a win procedure is initiated if the win line combination is the same as the combination on the display device 13, whereby the player is given an extra win possibility which may be a special jackpot win. Alternatively or additionally the arrangement may be such that a win procedure is initiated if any symbol of the win line combination is the same as the symbol in the corresponding position on the display device 13. Any payout made as a consequence of correspondence of the two displays may be instead of or additional to any payout arising due to correspondence with the win line combination and one of the win table combinations.

The display device 13 may come into operation on every game or only on some games (e.g. selected at random) or only when requested by the player (e.g. by operation of a player control).

The display device 13 may produce a changing symbol display e.g. simulating rotation of reels or otherwise before the selected combination is displayed.

65 In addition to displaying combinations of sym-

bols the device 13 may also display animated characters as an integral part of features and general game play occurring at the same time and/or at a different time to the symbol display; also it may display alphanumeric information.

For example, animated characters may move across the display device 13 drawing attention to a displayed symbol or appearing to move the symbols.

70 With the arrangement described above an additional feature giving additional playing interest is readily achieved whilst retaining the conventional rotating reel format which is found to have special player appeal.

75 Moreover, due to the nature of the display device 13 which provides this additional feature, the machine can be manufactured in a particularly simple and convenient manner.

It is of course to be understood that the invention is not intended to be restricted to the details of the above embodiment which are described by way of example only. Thus, for example, although reference is made to a three-reel fruit machine it is also possible to use four reels (together with a corresponding four-symbol display on the device) or any other suitable agreement.

#### CLAIMS

- 95 1. A coin- or token-operated entertainment machine of the kind defined characterised by the provision of a display device operable to produce a supplementary display at a region different from said main display region, said display device comprising an electronically controlled matrix display device, and said evaluation device being operable to evaluate the combination displayed at the main display region with reference to the said supplementary display.
- 100 2. A machine according to claim 1, characterised in that the supplementary display comprises one or a combination of symbols of the same kind as those from which the main display is selected.
- 105 3. A machine according to claim 1 or 2, characterised in that the supplementary display defines a supplementary winning selection whereby a win indication is given if the main display combination is the same as the supplementary display combination or contains a symbol or symbols the same as a corresponding symbol or symbols of the supplementary display.
- 110 4. A machine according to any one of claims 1 to 3, characterised in that the supplementary display is also operable to produce an informative or decorative display.
- 115 5. A machine according to any one of claims 1 to 4, characterised in that said display device comprises an LCD dot matrix display device.
- 120 6. A machine according to any one of claims 1 to 5, which is a fruit machine.
- 125 7. A machine according to claim 1, substantially as hereinbefore described with reference to and as illustrated in the accompanying drawings.